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PATENTKANTOOR

REPUBLIC OF SOUTH AFRICA

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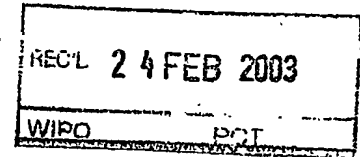
REPUBLIEK VAN SUID-AFRIKA

DEPARTMENT OF TRADE
AND INDUSTRY

Rec'd PCT/PTO 02/JUL 2004
17.02.03 Certificate #2

PATENT OFFICE

Hiermee word gesertifiseer dat
This is to certify that



The documents annexed hereto are true copies of:

Application forms P1, provisional specification and drawings
of South African Patent Application No. 2002/2919 as originally filed
in the Republic of South Africa on 15 April 2002 in the name of
VON SEIDEL, MICHAEL; LEVIN, JULIAN for an invention
entitled: "FREEZER FAILURE INDICATOR".

Geteken te
Signed at

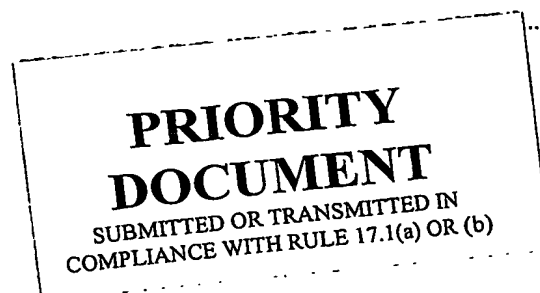
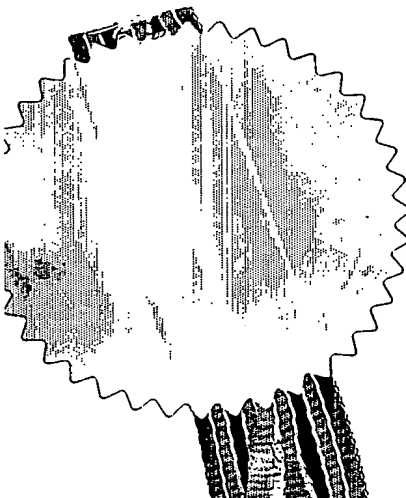
PRETORIA

in die Republiek van Suid-Afrika, hierdie
in the Republic of South Africa, this

15th

dag van
day of

January 2003



[Signature]
Registrateur van Patente
Registrar of Patents

FORM P2

REPUBLIC OF SOUTH AFRICA
REGISTER OF PATENTS
PATENTS ACT, 1978

21	01	Official Application No. 2002/2919	22	Lodging Date : Provisional 2002-05-15	47	Acceptance Date
51	International Classification		23	Lodging Date : Complete		Granted Date
71	Full name(s) of Applicant(s)/Patentee(s) VON SEIDEL, Michael LEVIN, Julian					
71	Applicants substituted:					Date registered
71	Assignee(s)					Date registered
72	Full name(s) of Inventor(s) VON SEIDEL, Michael					
Priority claimed	33	Country	31	Number	32	Date
54	Title of Invention FREEZER FAILURE INDICATOR					
Address of Applicant(s)/Patentee(s) 10 LECCINO TERRACE, BAKKERSHOOGTE, SOMERSET WEST WESTERN CAPE PROVINCE, 7130 SOUTH AFRICA 6, 5TH AVENUE, EMMARENTIA, JOHANNESBURG GAUTENG PROVINCE, 2195 SOUTH AFRICA						
74	Address for service Michael von Seidel, 10 Leccino Terrace, Bakkershoogte, Somerset West Western Cape Province, 7130 South Africa					
61	Patent of Addition No.			Date of any change		
Fresh Application based on				Date of any change		

REPUBLIC OF SOUTH AFRICA
PATENTS ACT, 1978

REGISTRATIE VAN PATENTEN, MODELLEN, MERKEN EN ANDERE RECHTEN VAN EIGENDOM

R10 R50

2002-1-1

NOT TRANSFERABLE

REGISTRATIE VAN PATENTEN, MODELLEN, MERKEN EN ANDERE RECHTEN VAN EIGENDOM

REGISTRATEUR VAN DE NEDERLANDSE HANDELSRECHTERSPERZONEN

21	01	Official Application No. 2002/2919	22	Lodging Date	47	Applicant's Reference No. P0139A
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71	Full name(s) of applicant(s)
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	LEVIN, Julian

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6, 5TH AVENUE, EMMARENTIA, JOHANNESBURG
GAUTENG PROVINCE, 2195 SOUTH AFRICA

54	Title of invention FREEZER FAILURE INDICATOR
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The applicant claims priority as set out in the accompanying form P2
The earliest priority is
This application is for a Patent of Addition to Patent (Application) No.
This application is a fresh application in terms of S 37 and based on Application No.

21	01	
21	01	

This application is accompanied by:-

X	1a	A single copy of a provisional specification of	6	pages
	1b	Two copies of a complete specification of		pages
	2a	Informal drawings of Nil sheets		
X	2b	Formal drawings of 1 sheets		
	3	Publication particulars and abstract (form P8 in duplicate)		
	4	A copy of Figure of the drawings for the abstract		
	5	Assignment of invention (from the inventor(s)) or other evidence of title		
	6	Certified priority documents (documents)		
	7	Translation of priority documents (documents)		
	8	Assignment of priority rights		
	9	A copy of form P2 and the specification of S.A. Patent Application No.		
	10	A declaration and power of attorney on form P3		
	11	Request for ante-dating on form P4		
	12	Request for classification on form P9		
	13a	Request for delay of acceptance on form P4		
	13b			

74 Address for Service:
Michael von Seidel, 10 Leccino Terrace, Bakkershoogte, Somerset West
Western Cape Province, 7130 South Africa

Date 10th April 2002

for the applicant

The duplicate will be returned to the applicant's address for service as proof of lodging but is not valid unless endorsed with official stamp

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FORM P6

REPUBLIC OF SOUTH AFRICA
PATENTS ACT, 1978
PROVISIONAL SPECIFICATION

Section 30 (1) — Regulation 27

21	01	Official application No. 2002/2919	22	Lodging date
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71 Full name(s) of applicant(s)

VON SEIDEL, Michael
LEVIN, Julian

72 Full name(s) of inventor(s)

VON SEIDEL, Michael

54 Title of invention

FREEZER FAILURE INDICATOR

FREEZER FAILURE INDICATOR

5 FIELD OF THE INVENTION

This invention relates to a freezer failure indicator of the type described in our co-pending patent application number 2002/0047 filed under an identical title, and this application is to be cognated with that earlier application.

10

BACKGROUND TO THE INVENTION

An additional difficulty with existing proposals, and one that is not dealt with in our earlier application, is the fact that the container of the type of device with which the invention is concerned generally has to be pre-frozen in one orientation and then inverted in order to be rendered functional.

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It is not always immediately apparent, or, alternatively, not easily perceived, that the indicator has not been inverted from its position in which it becomes pre-frozen to the position in which it becomes functional.

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OBJECT OF THE INVENTION

It is accordingly an object of this invention to provide a freezer failure indicator device of the type described in our earlier patent application in which this difficulty is addressed.

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SUMMARY OF THE INVENTION

In accordance with this invention there is provided a freezer failure indicator assembly comprising an indicator unit in the form of a generally elongate

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closed container defined by walls forming an internal cavity containing a quantity of a liquid having a freezing point selected so that it will be frozen at normal operating temperatures of a freezer with which it is to be used and wherein the walls of the container have an opaque zone associated with one end region of the container and a transparent zone associated with the other end region of the container; the container being such as to enable the liquid to be pre-frozen within the opaque zone with the transparent zone uppermost followed by re-orientating the container to render the transparent zone lowermost, colour imparting means for imparting a first colour to the transparent zone in its lowermost position in the absence of any liquid being present in the transparent zone and a second colour chosen to provide a colour indication distinctly different from said first colour when the liquid is present in the transparent zone, and means for imparting a third colour to the transparent zone in its uppermost position corresponding to pre-freezing of the indicator unit.

Further features of the invention provide for the assembly to include a support bracket or clip for supporting the indicator unit on the inside wall of a freezer for example; and for other features of the indicator unit and the bracket or the assembly to be, as may be appropriate, as set out in our said earlier patent application.

In its preferred form the bracket or clip has one colour such as orange or amber at its upper end that is visible through the transparent zone the inlet and the pre-freeze orientation and another colour, typically green or blue, visible through the transparent zone when it is lowermost and devoid of liquid. In such a case the liquid is preferably opaque so as to obscure the green or blue colour when it is present in the operatively lowermost transparent zone and the liquid is preferably red in colour.

In order that the invention may be more fully understood one embodiment thereof will now be described with reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings:-

5 Figure 1 is an exploded isometric view showing one form of supporting bracket wherein the colour imparting means is in the form of coloured areas of the bracket that are selectively visible through the transparent zone of the indicator unit;

10 Figure 2 is an elevation of the assembled indicator illustrated in Figure 1 in an orientation corresponding to pre-freezing thereof;

15 Figure 3 is a similar sectional elevation illustrating the indicator unit in a pre-frozen and inverted functional orientation; and,

20 Figure 4 is a similar elevation illustrating the indicator unit in the orientation illustrated in Figure 3 but after the pre-frozen liquid has thawed.

DETAILED DESCRIPTION WITH REFERENCE TO THE DRAWINGS

In the embodiment of the invention illustrated in the drawings, the freezer failure indicator assembly includes an indicator unit in the form of a permanently closed container (1) formed of two parts of injection moulded plastics material the one part (2) being of opaque plastic, conveniently appliance white for example, and the other part (3) being of transparent plastics material as described in our said earlier patent application. In the freezer failure indicator will not be described in any particular further detail herein as it is substantially the same as described our earlier patent application. Also, for convenience of description, reference numerals used in

our said earlier patent application have been inserted in the attached drawings for purposes of continuity.

In this implementation of the present invention the water in the container is rendered opaque and red in colour so that when it occupies the transparent zone it will obscure any colour on the inside surface of the bracket and will itself be highly visible and obvious by giving the transparent zone a bright red colour.

The clip (8) for supporting the container in an upright position is also as described in our earlier patent application and will not be described further herein. More particularly, it is substantially identical to that described with reference to Figure 6 of the drawings of our said earlier patent application. Thus, the operatively lower region of the inner surface of the clip is coloured green or blue, as indicated by numeral (20) and in terms of the present invention, the upper region of the inner surface is coloured amber or orange as indicated by numeral (21).

Order to pre-freeze the indicator unit described above it is introduced into the bracket in the orientation illustrated in Figure 2, ie with the opaque part (2) lowermost and the transparent part (3) uppermost. In this orientation the amber or orange colour is quite clearly visible through the transparent part and serves as an indication or reminder that the container has not been inverted to its functional position in which the transparent part is lowermost and the green or blue colour is visible through it.

Other than the presence and utility of the additional amber or orange colour being visible through the transparent part in the pre-freeze orientation of the container the freezer failure indicator provided by this invention operates in exactly the same manner as is described in our said earlier patent application. Accordingly, as illustrated in Figure 3, the green colour (20) is visible through the transparent part (3) when it is lowermost with the frozen

water maintained in the opaque upper part and, as illustrated in Figure 4, when the red coloured opaque water indicated by numeral (22) thaws, that a red colour obscures the green colour of the lower portion of the end only the red colour is visible thereby indicating that there has been a failure of the freezer.

It will be understood that many variations may be made to the particular embodiment of the invention described above and the manner of providing the third colour that becomes visible only when the container is in its pre-freeze orientation and not in any other orientation of the container.

It is envisaged that the addition of the third warning colour that is adapted to draw attention to the fact that the container has not been re-orientated to render it functional is a significant and useful additional feature to the freezer failure indicator provided by our earlier patent application.

Dated this 10th day of April 2002



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for the applicants

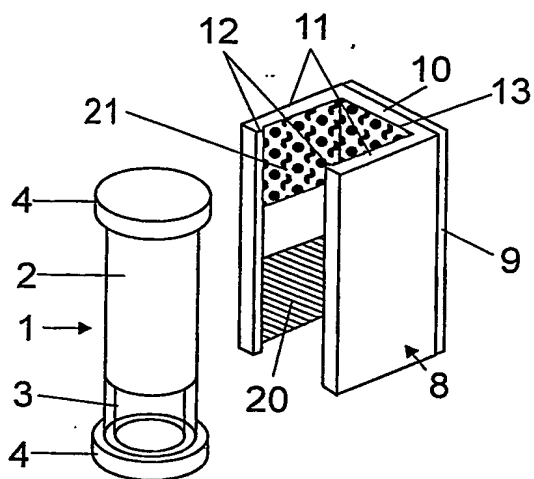


Fig 1

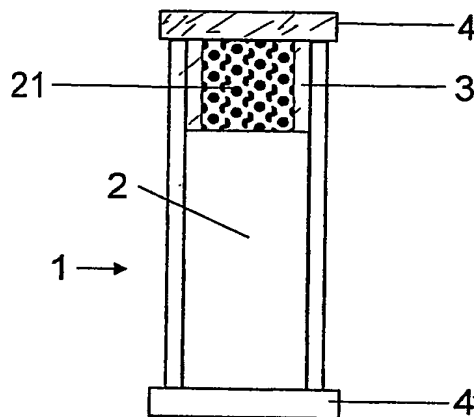


Fig 2

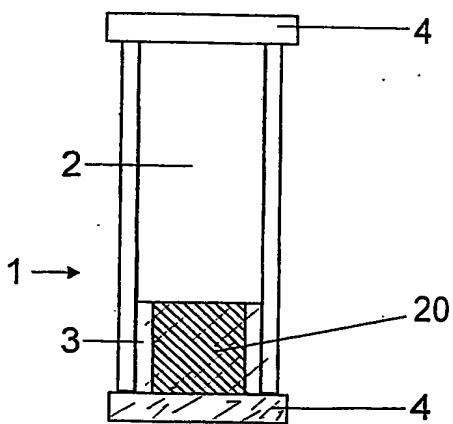


Fig 3

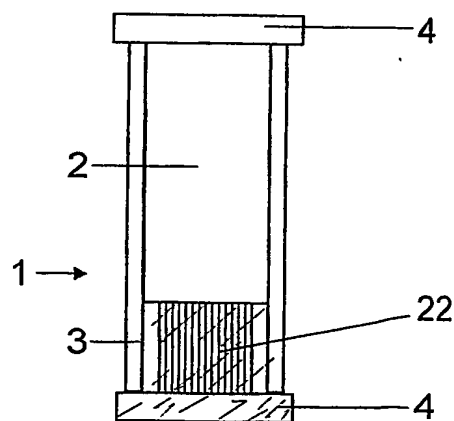


Fig 4

for the applicants